

WHAT IS CLAIMED IS:

- 1 ~~1. A data structure disposed in a document datastream for providing,~~
- 2 object level management using tagged secondary resources, the data structure
- 3 including at least one mapping structure for identifying rendering control data as a
- 4 secondary resource and at least one include object structure for referencing the
- 5 rendering control data.
- 1 2. The data structure of claim 1 wherein a plurality of mapping structures
- 2 are provided.
- 1 3. The data structure of claim 2 wherein a plurality of include object
- 2 structures to an object reference the identified rendering control data.
- 1 4. The data structure of claim 1 wherein a plurality of include object
- 2 structures to an object are provided for referencing identified rendering control data.
- 1 5. The data structure of claim 1 wherein the rendering control data
- 2 comprises source calibration parameters.
- 1 6. The data structure of claim 5 wherein the source calibration
- 2 parameters comprise a color profile.
- 1 7. The data structure of claim 5 wherein the source calibration
- 2 parameters comprise halftoning parameters.
- 1 8. The data structure of claim 1 wherein the rendering control data
- 2 comprises text rendering parameters.

1 ~~9. The data structure of claim 1 wherein the rendering control data~~
2 comprises vector graphic rendering parameters.

1 10. The data structure of claim 1 wherein the rendering control data
2 comprises image rendering parameters.

1 11. A method for providing object level management using tagged
2 secondary resources, comprising:

3 mapping rendering control data for at least one object as a secondary
4 resource;

5 including at least one include structures for the at least one object that
6 references the mapped rendering control data;

7 printing a page containing the at least one object, the at least one object on
8 the page being rendered according to the mapped rendering control data for the at
9 least one object.

1 12. The method of claim 11 wherein the rendering control data comprises
2 source calibration parameters.

1 13. The method of claim 12 wherein the source calibration parameters
2 comprise a color profile.

1 14. The method of claim 12 wherein the source calibration parameters
2 comprise halftoning parameters.

1 15. The method of claim 11 wherein the rendering control data comprises
2 text rendering parameters.

1 ~~16. The method of claim 11 wherein the rendering control data comprises~~
 2 vector graphic rendering parameters.

1 17. The method of claim 11 wherein the rendering control data comprises
 2 image rendering parameters.

1 18. A method for providing object level management for a page using
 2 tagged secondary resources, comprising:

3 determining whether rendering control data for an object is mapped;

4 making the rendering control data for the object available in the printer;

5 including the object that references the mapped rendering control data for the
 6 object;

7 determining whether additional rendering control data is to be mapped;

8 making additional rendering control data for additional objects available in the
 9 printer and including the additional objects that reference the additionally mapped
 10 rendering control data for the additional objects when it is determined that additional
 11 rendering control data is to be mapped;

12 rendering objects in page according to mapped rendering control data for the
 13 objects; and

14 printing the page.

1 19. The method of claim 18 wherein the rendering control data comprises
 2 source calibration parameters.

1 20. The method of claim 19 wherein the source calibration parameters
 2 comprise a color profile.

1 24. ~~The method of claim 19 wherein the source calibration parameters~~
2 ~~comprise halftoning parameters.~~

1 22. The method of claim 18 wherein the rendering control data comprises
2 text rendering parameters.

1 23. The method of claim 18 wherein the rendering control data comprises
2 vector graphic rendering parameters.

1 24. The method of claim 18 wherein the rendering control data comprises
2 image rendering parameters.

1 25. A system for providing object level management for a page,
2 comprising:

3 a print server for receiving an application datastream defining a document
4 containing objects for printing and creating a printer datastream that is specific to a
5 destination printer engine in order to integrate with the printer's specific capabilities
6 and command set; and

7 a control unit for maintaining cached objects, the control unit further
8 comprising a raster image processor for rendering object according to commands
9 provided by the print server in the printer datastream;

10 wherein the application datastream maps at least one set of rendering control
11 data as a secondary resource and includes at least one object that references the at
12 least one mapped set of rendering control data based upon a data structure in the
13 application datastream that tags rendering control data to objects.

1 26. The system of claim 25 wherein the secondary resource is shipped
2 resident in the printer.

1 ~~27. The system of claim 25 wherein the secondary resource is~~
2 downloaded by the print server based upon the mapping when the secondary
3 resource is not resident.

1 28. The system of claim 25 wherein the rendering control data comprises
2 source calibration parameters.

1 29. The system of claim 28 wherein the source calibration parameters
2 comprise a color profile.

1 30. The system of claim 28 wherein the source calibration parameters
2 comprise halftoning parameters.

1 31. The system of claim 25 wherein the rendering control data comprises
2 text rendering parameters.

1 32. The system of claim 25 wherein the rendering control data comprises
2 vector graphic rendering parameters.

1 33. The system of claim 25 wherein the rendering control data comprises
2 image rendering parameters.

1 ~~34. An article of manufacture comprising a program storage medium~~
2 readable by a computer, the medium tangibly embodying one or more programs of
3 instructions executable by the computer to perform a method for providing object
4 level management for a page, the method comprising:

5 mapping rendering control data for at least one object as a secondary
6 resource;

7 including at least one include structure for the at least one object that
8 references the mapped rendering control data;

9 printing a page containing the at least one object, the at least one object on
10 the page being rendered according to the mapped rendering control data for the at
11 least one object.

1 35. The article of manufacture of claim 34 wherein the rendering control
2 data comprises source calibration parameters.

1 36. The article of manufacture of claim 35 wherein the source calibration
2 parameters comprise a color profile.

1 37. The article of manufacture of claim 35 wherein the source calibration
2 parameters comprise halftoning parameters.

1 38. The article of manufacture of claim 34 wherein the rendering control
2 data comprises text rendering parameters.

1 39. ~~The article of manufacture of claim 34 wherein the rendering control~~
2 data comprises vector graphic rendering parameters.

1 40. The article of manufacture of claim 34 wherein the rendering control
2 data comprises image rendering parameters.

1 41. An article of manufacture comprising a program storage medium
2 readable by a computer, the medium tangibly embodying one or more programs of
3 instructions executable by the computer to perform a method for providing object
4 level management for a page, the method comprising:
5 determining whether rendering control data for an object is mapped;
6 making the rendering control data for the object available in the printer;
7 including the object that references the mapped rendering control data for the
8 object;
9 determining whether additional rendering control data is to be mapped;
10 making additional rendering control data for additional objects available in the
11 printer and including the additional objects that reference the additionally mapped
12 rendering control data for the additional objects when it is determined that additional
13 rendering control data is to be mapped;
14 rendering objects in page according to mapped rendering control data for the
15 objects; and
16 printing the page.

1 42. The article of manufacture of claim 41 wherein the rendering control
2 data comprises source calibration parameters.

43. The article of manufacture of claim 42 wherein the source calibration parameters comprise a color profile.

44. The article of manufacture of claim 42 wherein the source calibration parameters comprise halftoning parameters.

45. The article of manufacture of claim 41 wherein the rendering control data comprises text rendering parameters.

46. The article of manufacture of claim 41 wherein the rendering control data comprises vector graphic rendering parameters.

47. The article of manufacture of claim 41 wherein the rendering control data comprises image rendering parameters.

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